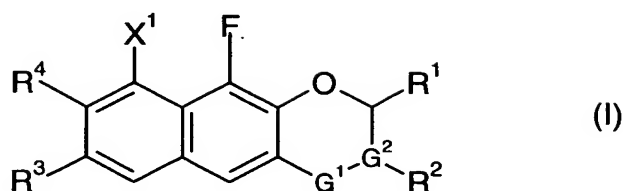


What is claimed is:

1. Compounds of the formula (I)



where:

X^1 is H or F

G^1-G^2 is $-CH_2-CH-$ or $CH=C-$

R^1, R^2 are

a) H

b) the $M^2-A^2-R^5$ moiety

c) a straight-chain or branched alkyl radical having from 1 to 16 carbon atoms or a straight-chain or branched alkenyl radical having from 2 to 16 carbon atoms, in each of which

c1) one or more nonadjacent and nonterminal CH_2 groups may be replaced by $-O-$, $-C(=O)O-$, $-O-C(=O)-$, $-O-C(=O)-O-$, $-C(=O)-$ or $-Si(CH_3)_2-$ and/or

c2) one CH_2 group may be replaced by $-C\equiv C-$, cyclopropane-1,2-diyl, cyclobutane-1,3-diyl, cyclohexane-1,4-diyl or phenylene-1,4-diyl and/or

c3) one or more hydrogen atoms may be replaced by F and/or Cl,

R^3 is

a) H

b) the $M^2-A^2-R^5$ moiety

c) a straight-chain or branched alkyl or alkyloxy radical having from 1 to 16 carbon atoms or a straight-chain or branched alkenyl or alkenyloxy radical having from 2 to 16 carbon atoms, in each of which

c1) one or more nonadjacent and nonterminal CH_2 groups may be replaced by $-O-$, $-C(=O)O-$, $-O-C(=O)-$, $-O-C(=O)-O-$, $-C(=O)-$ or $-Si(CH_3)_2-$ and/or

- c2) one CH₂ group may be replaced by -C≡C-, cyclopropane-1,2-diyl, cyclobutane-1,3-diyl, cyclohexane-1,4-diyl or phenylene-1,4-diyl and/or
 c3) one or more hydrogen atoms may be replaced by F and/or Cl,

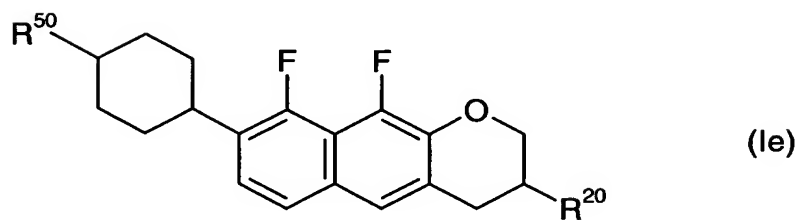
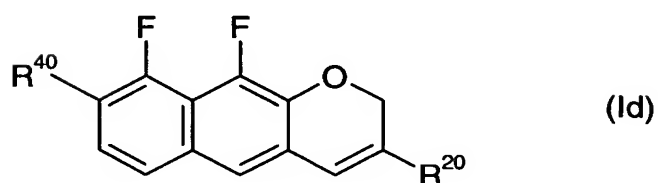
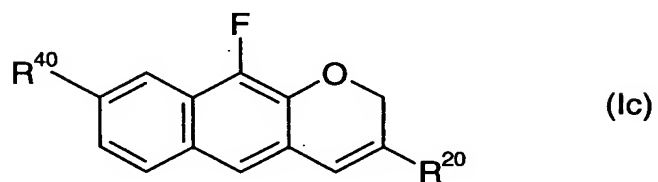
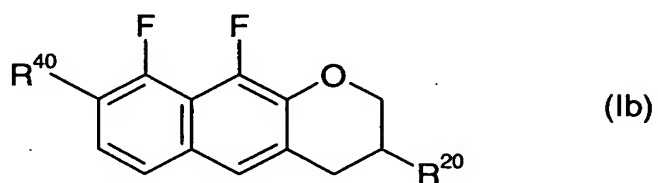
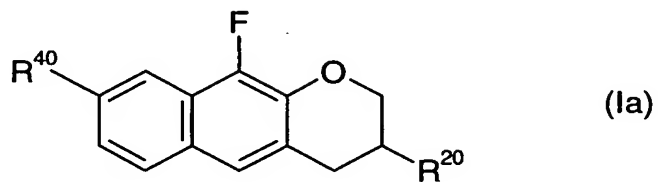
R⁴ is

- 5 a) H
 b) F, Cl, CN, -NCS, CF₃, CHF₂, CH₂F, OCF₃, OCHF₂, OCH₂F, OCH₂CF₃,
 OCH=CF₂
 c) the M²-A²-R⁵ moiety
 d) a straight-chain or branched alkyl or alkyloxy radical having from 1 to 12
 10 carbon atoms or a straight-chain or branched alkenyl or alkenyloxy radical
 having from 2 to 12 carbon atoms, in each of which
 d1) one or more nonadjacent and nonterminal CH₂ groups may be
 replaced by -O-, -C(=O)O-, -O-C(=O)-, -O-C(=O)-O-, -C(=O)- or -Si(CH₃)₂-
 and/or
 15 d2) one CH₂ group may be replaced by -C≡C-, cyclopropane-1,2-diyl or
 cyclobutane-1,3-diyl and/or
 d3) one or more hydrogen atoms may be replaced by F and/or Cl,
 M² is -CO-O-, -O-CO-, -CH₂-O-, -O-CH₂-, -CF₂-O-, -O-CF₂-, -CH=CH-, -CF=CF-,
 -C≡C-, -CH₂-CH₂-CO-O-, -O-CO-CH₂-CH₂-, -CH₂-CH₂-, -CF₂-CF₂-, -(CH₂)₄-,
 20 -OC(=O)CF=CF- or a single bond
 A² is 1,4-phenylene in which one or two hydrogen atoms may be replaced by F,
 Cl, CN and/or OCF₃ or up to three hydrogen atoms may be replaced by fluorine, is
 1,4-cyclohexylene in which one or two hydrogen atoms may be replaced by CH₃
 and/or F, is 1-cyclohexene-1,4-diyl in which one hydrogen atom may be replaced by
 25 CH₃ or F or is 1,3-dioxane-2,5-diyl,
 R⁵ has the same possible definitions as R³ except -M²-A²-R⁵,

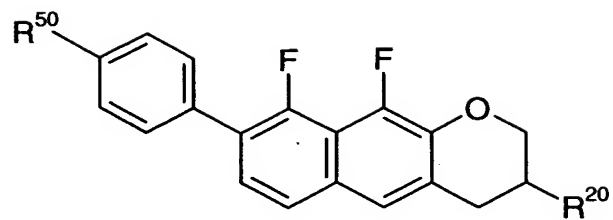
with the provisos that

- a) when R² is not H, R¹ and R³ have to be H,
 30 b) when R² is H, R⁴ must not have the definitions c) or d),
 c) R¹, R², R³ and R⁴ must not at the same time be H.

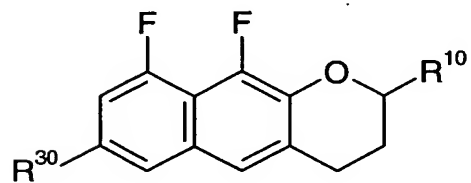
2. Compounds of the formula (I) as claimed in claim 1 corresponding to the partial structures (Ia) to (Ik):



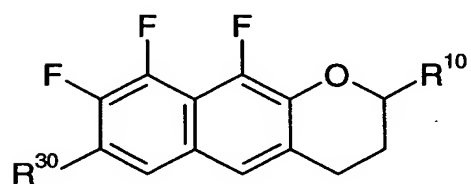
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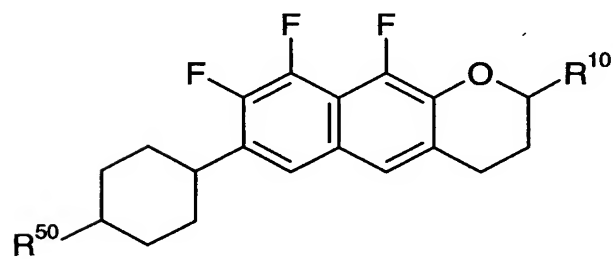
(If)



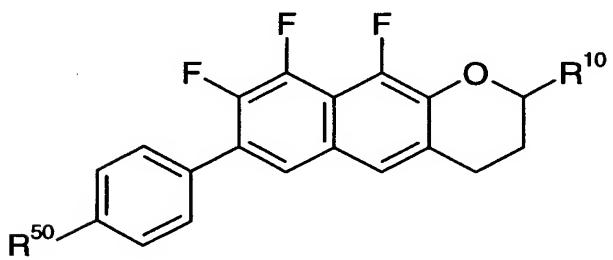
(Ig)



(Ih)



(Ii)



(Ik)

5

10

R^{10} is H or a straight-chain or branched alkyl radical having from 1 to 6 carbon atoms or a straight-chain or branched alkenyl radical having from 2 to 6 carbon atoms, in each of which one (nonterminal or adjacent to the ring) $-CH_2$ group may also be replaced by $-O-$

5

R^{20} is H or a straight-chain or branched alkyl radical having from 1 to 6 carbon atoms or a straight-chain or branched alkenyl radical having from 2 to 6 carbon atoms, in each of which one (nonterminal or adjacent to the ring) $-CH_2$ group may also be replaced by $-O-$

10

R^{30} is H or a straight-chain or branched alkyl radical having from 1 to 6 carbon atoms or a straight-chain or branched alkenyl radical having from 2 to 6 carbon atoms, in each of which one (nonterminal or adjacent to the ring) $-CH_2$ group may also be replaced by $-O-$

15

R^{40} is H or a straight-chain or branched alkyl radical having from 1 to 6 carbon atoms or a straight-chain or branched alkenyl radical having from 2 to 6 carbon atoms, in each of which one (nonterminal or adjacent to the ring) $-CH_2$ group may also be replaced by $-O-$

20

R^{50} is H or a straight-chain or branched alkyl radical having from 1 to 6 carbon atoms or a straight-chain or branched alkenyl radical having from 2 to 6 carbon atoms.

25 3. A liquid-crystal mixture comprising at least one compound of the formula (I) as claimed in claim 1.

4. The liquid-crystal mixture as claimed in claim 3, which comprises one or more compounds of the formula (I) in an amount of from 1 to 40% by weight, based on the
30 liquid-crystal mixture.

5. The liquid-crystal mixture as claimed in claim 3, which comprises at least three further components having smectic and/or nematic and/or cholesteric phases.

6. The liquid-crystal mixture as claimed in claim 3, which is chiral-smectic.

7. The liquid-crystal mixture as claimed in claim 3, which is nematic or cholesteric.

5

8. A liquid-crystal display, comprising a liquid-crystal mixture as claimed in claim 3.

9. The liquid-crystal display as claimed in claim 8, which is operated in ECB, IPS
10 or VA display mode and in which the liquid-crystal mixture is nematic or cholesteric.